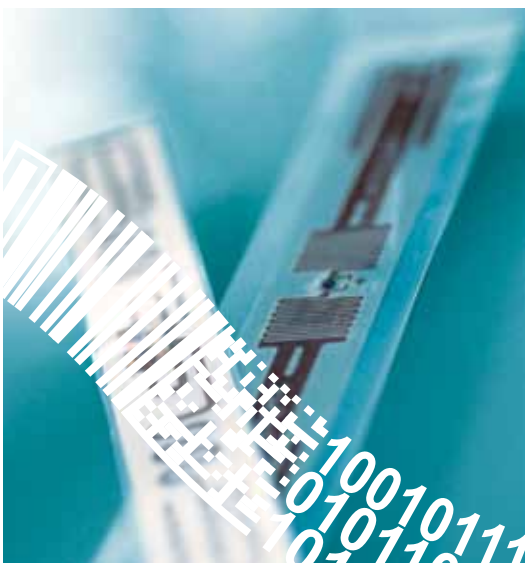
GS1 STANDARDS IN TRANSPORT, LOGISTICS AND CUSTOMS



KEEPING THE HEART OF INDUSTRY BEATING

ACKNOWLEDGEMENTS

We are pleased to share with you a variety of success stories from transportation and logistics teams who have successfully used the GS1 System of standards to face their challenges and meet their objectives.

We would like to thank the following for contributing to this second edition:

Heide Buhl, GS1 Germany / **Mia Lenman**, **Alice Mukaru** and **Cecilia Gyldén** , GS1 Sweden / **Jeff Chan**, **Eric Chow**, GS1 Hong Kong / **Carrie Wen**, **James Perng**, GS1 Taiwan / **Koji Asano**, GS1 Japan / **Naotaka Ishizawa**, NYK / **Rafael Flórez**, **Yara Montaña** , GS1 Colombia / **Elzbieta Halas**, **Piotr Frąckowiak** and **Patrycja Gaj**, GS1 Poland / **Edyta Staszczyk**, Raben Poland / **Lisa Sandberg**, **Steve Arens**, **Susanna Valerius**, GS1 US / **Jan Somers**, **Nicolas Stuyckens**, GS1 Belgium & Luxembourg / **Douglas Bailey**, US Department of Agriculture / **Lennart Andersson**, the Swedish Transport Administration / **Gunnar Ivansson**, LearningWell

Yuliya Shevchenko
Group Manager, Transport & Logistics and Customs
GS1 Global Office

Nora Kaci
Marketing Manager, T&L and Customs
GS1 Global Office

Transport and Logistics (T&L) activities act as the veins and arteries of industry, keeping the essential life-blood of business flowing and the heartbeat of commerce beating. T&L involves complex business disciplines that require interactions between many different departments within a business, as well as their partners, suppliers and customers. They have also become a high-technology activity: a variety of transport and warehouse management technologies and software applications are now associated with the movement of goods from the material supplier to the manufacturer to the end customer.

Improving supply chain efficiency – GS1 in T&L

Businesses need to streamline costs, increase revenue streams, comply with legislation. Companies that provide logistic services can significantly reduce shippers' spending on goods warehousing and transportation. By adopting GS1 Standards, the efficiency and visibility of T&L operations of supply chain stakeholders can be improved.

GS1 T&L Industry User Group

GS1 has established the T&L Industry User Group (IUG), a voluntary group consisting of manufacturers, retailers, and logistics solution providers from across the globe, to lead and implement GS1 Global standards in Transport & Logistics. By working with this user group we can be certain that we are tackling the issues and challenges that really matter to industry.

A large number of GS1 standards have been developed so far, and the objective of our work is to facilitate adoption of these standards by supply chain stakeholders. This will ultimately bring both savings to business operations and benefits to their customers.

How the GS1 system of standards can help

With GS1 Standards as the basis for their operations and services, transportation and logistics teams can standardise information and automate its collection and this leads to much greater efficiency in transport and warehousing.

Using GS1 Standards means that you can be sure that the information about each part of the process is reliable. It gives much better visibility of goods throughout the supply chain, including being able to track every stage and trace shipments back to their origin. There is also much better security throughout every step of the process, which guards against theft and, in some areas, this can also help with regulatory compliance.

Adopting GS1 standards has sustainability benefits, since improved efficiency in transportation means reduced CO2 use and full traceability of goods ensures better social responsibility. Finally, the improved efficiency ultimately leads to greater profitability, since the right goods get to the right place at the right time.

With GS1's voluntary, user-designed standards, companies in the transportation and logistics sector can work more efficiently, more economically, more sustainably and more competitively and we are delighted to share with you, in this brochure, a variety of success stories from transportation and logistics teams who have successfully used the GS1 System of standards to face their challenges and meet their objectives.

Get started on your own success story! Learn more about GS1 Standards in the transportation and logistics sector at www.gs1.org/transportlogistics and then contact the GS1 Member Organisation in your country www.gs1.org/contact to find out how our standards can help your business.

GS1 Standards Help Government and Industry Work Smarter

Collaborating for Better Product Admissions at International Borders

Imagine the responsibility of protecting the 300 million citizens in the U.S. from unsafe consumer products. U.S. government agencies screen millions of product shipments arriving at U.S. borders each year. They must make prompt and well-informed decisions to admit or deny entry.

Although inspectors have been traditionally challenged by the volume of imports, tightening federal government budgets in the U.S. and around the globe suggest that future government success may well depend on finding new strategies for managing the admissions process. To address this interest, federal government agencies in the U.S. International Trade Data System (ITDS) created the Product Information Committee (PIC) to explore ways to utilize additional information to improve the efficiency and effectiveness of product admissions at international borders.

The Need for Visibility

Agencies like the Department of Health and Human Services' Food and Drug Administration (FDA), the United States Department of Agriculture's Food Safety Inspection Service (FSIS), the Consumer Product Safety Commission (CPSC), and the Environmental Protection Agency (EPA) each have the primary mission of protecting the public from unsafe or high-risk products. ***"But the absence of a standards-based product classification and identification system has limited their ability to screen and admit products,"*** says PIC Chairman Doug Bailey. ***"With greater visibility into product shipments, inspectors can make quicker and confident decisions. They can better manage the risk of imports for citizens and speed products through points of entry for industry."***

Since 2008, Bailey has worked with the meat and poultry industry to evaluate global product classification codes and their value for its supply chain. ***"The light bulb immediately came on for me. GS1 global standards are enabling supply chain priorities like traceability. Why not use them to gain the needed visibility for imported products?"***

The Strength of GS1 Standards

In the U.S., GS1 US™ has established a strong collaboration with the ITDS participating government agencies and the U.S. Customs Service to facilitate cross-border trade via GS1 Standards. In December 2010, the ITDS PIC released its report ***"Guidance for Using E-Commerce Data to Manage Product Admission at International Borders,"*** proposing the voluntary use of GS1 Standards and UN standards by industry for greater visibility with product data. The report provides government and industry with three basic recommendations:

- **GS1 Global Product Classification (GPC) and the United Nations Standard Products and Services Codes (UNSPSC) :** The importer can use global product classification codes such as the GPC brick and the United Nations Standard Products and Services Codes (UNSPSC) to extend product descriptions beyond the tariff code. The GS1 GPC system and UNSPSC provide a common, global language for grouping products in the same way. These codes can help government quickly determine jurisdictional responsibility and assess the general nature of product risk. And if GPC brick descriptors are used in addition to the brick code, product risk factors are even more precisely communicated.

- **GS1 Global Trade Item Number® (GTIN®):** The importer can use the GTIN whenever possible to identify each product in a shipment. This allows government to manage products by brand and model number, not just product type, and reuse previous admission decisions to dramatically improve efficiency.

- **GS1 Global Data Synchronization Network™ (GDSN®):** The use of product information in the GDSN creates additional efficiencies for industry and government. If product suppliers have published – one time only – its products' GTINs and associated product information into GS1 GDSN data pools, government can access this authoritative product information as a ***"cloud"*** service. Importers only need to provide the product GTIN at the time of import, and the government can tap into the product information stored in GDSN, including the GPC brick and attribute codes, to make informed decisions about products, particularly those with complex risk factors.

In summary, the government can reuse GDSN-stored product information, as needed, to make quick and knowledgeable decisions about product risk. Enhanced risk management means improved public and environmental safety. Government can also use product GTINs to reuse previous admissions decisions, which delivers new levels of efficiency and productivity.

In turn, highly productive inspectors expedite and improve the predictability of product movement for suppliers and importers. Expedited shipments lead to quicker time-to-shelf intervals and increased revenue for suppliers and retailers.

The Significance of Global Reach

GS1 Standards address government and industry challenges worldwide based on their global reach and broad acceptance.

- GS1 Standards are used broadly throughout the global supply chain – by suppliers, distributors, retailers and operators that span multiple industry sectors.
- Over 6.5 million GTINs are registered by 21,000 trading partners from 131 participating countries in the GS1 Global Data Synchronization Network, and product publication is expanding at a pace of about 1 million GTINs a year.
- GS1 Standards have been developed with input, feedback and consensus from industry.
- About one-third to over one-half of all products in trade are identified with GS1 GTINs. They will allow government to manage this segment of trade by brand and model number, not just by product type when only the tariff code is available.

The Value of Voluntary Action

The ITDS Product Information Committee recommends the use of e-commerce data by industry be voluntary. To better understand what's needed and the actual value on real-world transactions, the PIC is conducting three pilots focused on high-risk products – toys, meat and poultry, and flowers.

One pilot features the **Association of Floral Importers of Florida (AFIF)** working with the U.S. Customs Service to leverage GTINs and UNSPSC codes to expedite import inspections. "Over 87 percent of all floral imports come through Miami on airlines," says Christine Boldt, executive vice president of the AFIF. "Every shipment must be inspected, and boxes on the shipment are targeted based on their levels of risk for infestation. The inspection process is entirely done by pen and paper."

In the pilot, participating suppliers are using GTINs on boxes to indicate flower types and countries of origin. The GTINs are also listed on the invoice forwarded to importers. ***"Importers input the GTINs into the Customs' system,"*** describes Boldt.

"When the agricultural inspectors walk into the airline facility, they have a print out of the GTINs from the system and simply match them to the GTINs on the boxes. With the added product information, they can easily and quickly target high-risk boxes for inspections."

To date, the value of the pilot for importers and the government is clear: saving significant time by moving from a tedious, manual process to one that is expeditious and automated. Optimistic about the pilot's final results, Boldt concludes, ***"With GS1 Standards, I'm confident we can reduce the inspection time by at least 50 percent. And ultimately, with further collaboration and the use of technology such as barcode scanners, we can gain even greater reductions."***

Get Engaged

Suppliers, importers, and governments can get involved to explore the value of working smarter for better product admissions at international borders.

- Learn more by reading the PIC reports, ***"Leveraging E-Commerce Product Data for Smarter Cargo Management"*** (April 2009) and ***"Guidance for Using E-Commerce Data to Manage Product Admission at International Borders."*** Both reports are available at www.itds.gov.
- Share these concepts with your company's ***"U.S. Customs manager"*** and Customs managers at the borders where you conduct business.
- Discover the potential value for your company. Contact Doug Bailey at douglas.bailey@ams.usda.gov to see if a pilot can be started for products with strategic value for your company.

With continued collaboration, GS1, governments, and industries together can build a smarter global logistics process, enabling governments to efficiently manage the growing volume of international trade.

For more information contact:
Steve Arens at sarens@gs1us.org

Smoothing The Way For Goods Through Customs

Labour Intensive Processes

More than 1.2 million transhipped containers are temporarily stored at the Port of Kaohsiung every year and with five container centres at the Port, all of which are at various locations in the city, smuggling was common even with a human escort.

Prior to adopting EPC/RFID processing of in-transit containers relied on paper-based systems and this was very labour intensive. Around 40,000 to 50,000 of these containers have to be inspected every year and random inspections used to be performed automatically by a dynamic container audit system.

Each transport firm had to pay approximately USD $600,000 annually for escort services and escorting one container could take between 4 to 10 hours. Due to the problems with criminal activity it was considered vital to implement EPC/RFID, which meets the requirement of WCO SAFE (Framework of Standards to Secure and Facilitate the Global Trade), as a matter of urgency.

Putting EPC into operation at the Port of Kaohsiung, Taiwan (1)

"In-transit Container Escort Exemption Program at the Port of Kaohsiung" was funded by the Ministry of Economics Affaires, Taiwan and involved the EPC/RFID solution to replace human escort. This implemented during the period 2006 to 2008 and since 2010 all international ports in Taiwan have been required to adopt it.

With this programme each container has an eSeal attached onto its door frame. Every entry of the container centre has a reader point and was equipped with EPCglobal compliance readers.

The system had to have the following requirements:

- use the EPC C1 Gen2 standard.
- have a maximum reading distance of 7 meters.
- when vehicles in motion pass an inspection station at a speed of 60 km/h, the system must have a reading rate of at least 95% within 200 ms.
- must be able to read all types of EPC eSeals in spite of different seal locations and variations in metal background.
- the outdoor environment at the Port of Kaohsiung is hot, damp, and highly saline, and is subject to typhoons. Existing RFID hardware must enable the system to maintain 24-hour operations throughout the year.
- the system must achieve a high level of reliability and be connected and completely compatible with the Kaohsiung Harbour Bureau's existing online image identification system.

EPCIS - Customs data exchange (2)

EPCIS collects container transport information among Taiwan's main ports. The Directorate General of Customs, Taiwan, is the first customs sector in the world to own the EPCIS. The next step will be to extend the implementation of the system in order to improve cross-border cooperation and customs information sharing among different countries.

Escort, export, transhipped and import container information can all be generated and exchanged in multiple EPCIS which provides visibility for customs, encourages EPC/RFID adoption in container transport among Asia countries and facilitates Green Lane policy.

1

2

3

A Clear Route To Efficiency (3)

The new customs system at Port of Kaohsiung has a number of clear, demonstrable benefits, most notably:

- The labour intensive requirement for people to escort containers has been significantly reduced; by approximately 10,000 trips in escort operations of in-transit containers and 4,000 trips in inspections for inland transshipment, per year;
- Improvement in overall customs efficiency;

A reduction in around 48,000 hours per year in inspection for in-transit container transport;

- Container vehicles can now pass through quickly without stopping;
- A clear reduction in manpower and cost;
- A saving, for the transport and logistics industry, of about USD$3,100,000 per year in relation to the previous cost of document review and customs clearance;
- A much more robust approach to tackling smuggling and preventing cargo loss.

For more information contact:
Carrie Wen at carrie.wen@gs1tw.org

Improved warehouse management at Sun Rise thanks to EPCIS

Managing Global Logistics

Sun Rise Management Limited (Sun Rise) is a logistics service provider established in Hong Kong in 1999. The company provides warehouse, cargo transportation and haulage services to enterprises in the apparel, food, home appliance and raw materials industries around the world. The company operates a warehouse with 30,000 square feet in Yuen Long, Hong Kong.

Overcoming Inflexibility

With customers spread out around the world, Sun Rise's clients require the company to manage stock-in, stock-take and stock-out procedures of plastic particles and backpacks based not only on product codes, but also specific batch numbers according to their individual preferences. In addition, some clients require the company to manage inventory down to the item level. Using manual procedures, Sun Rise's warehouse operations were prone to human error and did not have the flexibility to cope with each client's individual preferences. "Our main objective was to enhance warehouse efficiency by minimizing human error. We wanted to achieve this by deploying the latest information technology solutions," said Mr Kwok Fai, Founder of Sun Rise.

Sun Rise decided to implement an EPC/RFID-based warehouse management system (WMS) based on the ezTRACK™ platform. The system was designed according to the company's logistics workflow and operations, which includes stock-in and stock-out procedures customized for each client's individual needs. The data collected during stock-in and stock-out using RFID handheld readers was synchronized from the EPC/RFID-based WMS to ezTRACK™ platform to capture accurate, real-time inventory data. With the system in place, Sun Rise was able to manage inventory by manufacturer batch numbers and perform stock-out at both the case and item levels.

Key Benefits

- Facilitating case and item-level stock-out

With the EPC/RFID-based WMS on ezTRACK™, Sun Rise can effectively locate and identify inventory, not only on the case level but also on the item-level, and manage it based on the individual logistics requirements of each client. For one customer, which manufactures backpacks, the company can provide item level tracking for individual backpacks during the stock-out procedure whereas in the past it could only track cases of, for instance, 10 backpacks.

- Enabling proof-of-delivery and eliminating returns

"With the use of the EPC/RFID-based WMS on GS1 Hong Kong's ezTRACK™ platform, we have enhanced the flexibility and efficiency of our warehouse management process. More importantly, we have an accurate and efficient delivery process that allows us to raise customer satisfaction," said Mr. Kwok.

ezTRACKTM: EPCIS standard traceability network, developed by GS1 Hong Kong, enabling real time visibility of goods and information flow from point of manufacturing to point of destination

The company is also able to provide real-time proof-of-delivery, which in turn will reduce or eliminate costly returns. "As a logistics service provider, we believe it is vital to fulfill each of our client's individual requirements for stock management to remain competitive. With the flexibility of the EPC/RFID-based WMS, we are now fully equipped to do so," he added.

For more information contact:
Jeff Chan at jeffchan@gs1hk.org

Efficiency and accuracy in stock management at Earnward Warehouse Limited

Streamlining Logistics

Earnward Warehouse Limited (EWL) was founded in Hong Kong in 1991, with 10,000 square feet in warehouse space. Since then, the company has grown rapidly and is now a logistics service provider with a 180,000-square-feet warehouse facility in Kwai Chung, Hong Kong. Through expanding its operations in Mainland China, the company also operates a warehouse with 200,000 square feet in Guangdong, Mainland China.

Challenges

EWL provides warehouse facilities for a variety of manufacturers and suppliers to store a large number of goods with various delivery lead times. Its facility in the China Aviation Logistics Centre in Kwai Chung stores more than 1,000 mattresses for a leading bedding company. Similar to other logistics service providers, EWL was managing its warehouse and inventory operations manually. Without a holistic inventory tracking process, EWL had to manually record the exact location of each mattress and locate the correct mattress during the stock-out process. This led to a high rate of human error when fulfilling orders, which resulted in costly shipment delays and an inability to meet delivery schedules.

Solution

In order to enhance the efficiency of stock taking and accuracy of stock-out procedures for the mattresses, EWL decided to deploy an EPC/RFID-based warehouse management system (WMS) in January 2010 and chose GS1 Hong Kong's ezTRACK™ platform, which is compliant with the globally recognized EPC Standards.

All the mattresses were assigned EPC-compliant RFID tags embedded with product information. All operational procedures for managing the mattresses, including the stock-in and stock-take processes, were performed using RFID handheld readers. The information collected from the reader was then transmitted to the EPC/RFID-based WMS, which synchronizes with the ezTRACK™ platform to enable product tracking and tracing from any location at any time. To ensure the stockout process was 100% accurate, warehouse personnel were required to verify each mattress using a RFID handheld reader.

Key Benefits

- **Stock-out procedure 100% accurate**

The mattresses handled by EWL are high value items, not easy to manually identify, and must be delivered according to strict schedules. The EPC/RFID-based warehouse management system has helped the company to handle these items more efficiently and to provide its client with more accurate delivery information, thus raising its standards of customer service.

"The deployment of the EPC/RFID-based warehouse management system is proving to be most helpful to our warehouse operation. By eliminating human error from our procedures, we have successfully achieved 100% accuracy in shipments," said Mr. Thomas Yau, IT Specialist, EWL, adding that this has eliminated costly stock returns.

- **Significant reduction in stock-take time**

With the use of RFID handheld readers, warehouse personnel can perform stock taking substantially faster.

"With our previous warehouse management procedures, it took 48 hours to complete the stock-checking process. Now, using the EPC/RFID-based WMS on the ezTRACK™ platform, the same task can be accomplished in half a day. We only need two personnel to handle this task instead of four. As a result, we can allocate our staff resources more efficiently and effectively when compared with manually monitoring and identifying stock," said Mr. Yau.

Overall, EWL's EPC/RFID-based WMS resulted in significantly quicker, more accurate and more efficient handling of its client's shipments. Through the power of real-time traceability, EWL also has full visibility of inventory stored in its warehouse facility.

For more information contact:
Jeff Chan at jeffchan@gs1hk.org

Sweden takes the lead in RFID standards for railways

Early in 2011 goods wagons marked with RFID tags will start to roll in a full-scale test of between some of the Volvo's facilities in Sweden and Belgium. This is a major step towards creating a common standard for identifying and tracking rolling stock throughout Europe.

It is the Swedish Transport Administration (previously the National Rail Administration) that has been testing RFFID solutions for many years. It all started with a system using active tags, but with the major drawback that they must be powered with batteries.

"The solution we have ended up with is based on passive RFID tags that are activated by the radio signal from the reader. This is a new generation of tags that can be read even when the trains are running at high speeds," says Gunnar Ivansson, consultant at Learningwell who has helped to develop the technology.

In order for the solution that Swedish Transport Administration is testing to be developed into a European standard, GS1's global standards for RFID are being used. Even the readers are standardized with a specific interface.

Lennart Andersson, who is responsible for the project at Swedish Transport Administration, is pleased with the high level of interest from all over Europe, *"Swedish Transport Administration was on GS1's stand at the InnoTrans fair in Berlin last autumn and we made contact with about 70 people from a long list of countries. Many different solutions are being tested, but we want to drive development so that there will really be a European standard that everyone can use."*
Operators in Sweden are also very keen that RFID technology is standardised so that it works outside Sweden, too, *"60 per cent of our volume is international, that is, it is in transit to or from Europe. Sweden lives by exporting, and transport is an important part of it,"* says Michael Nysten, quality manager at Green Cargo, a company that handles up to 60,000 loaded goods wagons each month.

Green Cargo has invested its own money in the trial, with Volvo Logistics' transports from Olofström in the south of Sweden, *"Keeping track of rolling stock using RFID tags is a simple and inexpensive solution. We have tried to put a GPS on the wagons, and that gets expensive,"* says Michael Nysten

Nysten continues,*"It is a great advantage, not least for freight customers, to be able to go to a web portal and easily access information about where the wagons and goods are".* Nysten also believes that RFID technology will reduce administration and paper handling, including everything from billing to reporting what has been done.

Swedish Transport Administration also foresees big gains with less administration and improved information to customers, and in addition expects to reduce maintenance costs, *"Goods wagons generate considerable wear and tear on the rails, especially if they have any damage. Today, we have difficulty getting an overview of which wagons have problems, but with RFID, we can identify wagons and take prompt action,"* says Lennart Andersson. *"We also get statistics that we can use for preventative maintenance."*

Labelling of wagons is carried out by the operators. There are two RFID tags on each wagon. According to Gunnar Ivansson the price has now dropped to about €3 per tag. It is Swedish Transport Administration that sets up readers and runs the system, which it is then is up to operators to use. The tests now being carried out will provide information about what services will be in demand.

"The railways have always been good at finding their own solutions in each country. We are now developing a standard that is common to all countries and which also can be used by other modes of transport," Lennart Andersson concludes.

When fully operational, it will be possible to follow a wagon through the whole of Europe using GS1 global standards.

For more information contact:
Alice Mukaru at alice.mukaru@gs1.se

GS1 Makes Port Operations Plain Sailing

The Port of Gothenburg is using RFID technology to get information about rail transports to and from the port.

The Port of Gothenburg is Scandinavia's largest port and for operations to run efficiently, early notification is needed on what to load and unload.

"The world's largest container vessels call at the port and in order to fill them we fetch shipments with rail shuttles from all over Sweden and Norway," says Arvid Guthed, business developer at the port.

As a prerequisite for the EU Dryport project, the Swedish Transport Administration (STA) is now installing readers on the stretch of track between the Port of Gothenburg and Falköping, in southwest Sweden where there is an inland terminal. The next step will be for the wagons to be marked up by the train operators according to GS1 standards for RFID. STA will then capture all the information when the wagons pass the RFID readers and put it out through a web interface.

More trains can be handled

"Advance information about a train's composition as it arrives at the terminal allows us to pre-position units for loading," says Arvid Guthed. "This shortens the handling time per train so we can take in more trains per day."

There are 26 rail shuttles that go between the various inland terminals and the Port of Gothenburg, so there are huge volumes to manage.

"Today, much of the reporting of what goods are bound for the port is done manually. There is a need to get early and correct information in an easier way. Everybody benefits from this," says Per Sjöholm at Starbright Consulting, technical project manager for the RFID project at the Port of Gothenburg.

The Port of Gothenburg also sees RFID technology providing increased potential for track and trace, that is linking container numbers to the wagon numbers.

For more information contact:
Cecilia Gyldén at cecilia.gylden@gs1.se

Optimising The Textile Supply Chain With GS1 Standards

In 2009, Gerry Webber, a world-renowned clothing company took the decision to put into place a ground breaking project for the entire international supply chain. They implemented EPC/RFID to optimise logistics procedures, processes in retail and at the same time they used it as a new form of retail security. During the development process a new innovation was also developed: the "normal" care label was extended to textile EPC/RFID tag combining functionality for anti-theft, manufacturer's instruction for care and the Electronic Product Code.

Increased Sales, More Channels

The number of textile articles sold at Gerry Weber was continuously increasing every year and they also increased the number of channels through which the products were sold. For this reason it became necessary to optimse the production and logistics processes at Gerry Weber but also at their stores and those operated by their franchise partners.

The test phase with the new EPC/RFID system in Gerry Weber stores were so successful that in the meantime the solution has been implemented in all the HOUSES OF GERRY WEBER in Germany and abroad. More than 26 million garments annually produced along the entire value chain are equipped 2011 with EPC/RFID technology. Together with renowned partners including Meyer & Meyer, Deutsche Post DHL, Avery Dennison and Deutsche Telekom, Gerry Weber AG created a groundbreaking project in the textile sector.

Tackling The Issues

Through the use of EPC/RFID technology, the following issues where uncovered and resolved:

1. The EPC/RFID-tags should be used as security tags that allow a large reading distance so that the unattractive security equipment from the entrances of stores become redundant. At the same time the need to install separate anti-theft devices in logistics and remove them at the checkout during the payment process is eliminated. This meant matching up the EPC/RFID tags already in production with the items, physically and logically. This also resulted in financial benefits over the recent theft devices.

2. With the possibility of bulk reading, processes such as goods entry or inventory recording in stores or warehouses can be improved. These processes are prone to error, especially when carelessly implemented and given the wide number of variants that are usually found in the textile industry. With the EPC/RFID technology, each textile article (piece of clothing), is allocated a single serial number which can be read via radio waves. This enables quick and safe reporting and establishes the link to the production lot. The EPC/RFID tag label should be securely attached to the textile care label. It is also important that the tissue between the EPC/RFID tags does not affect the reading rate.

3. There were also challenges for the partners of Gerry Weber. The logistics service provider Meyer & Meyer, one of the leading service providers of textile logistics who handles about 19 million textile items for Gerry Weber at different storage locations per year, took on the task of checking the quality of EPC/RFID tags and replacing them if necessary. This is the only way to ensure that 100 % of the articles are equipped with a readable tag in the store. For this purpose, Meyer & Meyer equipped barcode based systems handling hanging and lying garments with RFID-functionality to allow for a secure reading of the EPC-tags (without affecting the cycle times and avoiding additional product separation activities).

Benefits

There have been a number of clear benefits to the new system, including:

- Better control of deliveries of logistics service providers
- Acceleration of returned deliveries
- Faster processing of incoming goods and dispatch processes
- Reduction of out-of-stock situations by providing better inventory visibility
- Faster and more accurate inventories
- Recording of carton contents within seconds

MEYER&MEYER since 1902

The approaches of this project are transferable to other textile projects. The consistent use of GS1 and EPCglobal standards is an important prerequisite for the efficient use of this new technology.

In September 2010, Gerry Weber International AG and their project partners including Meyer & Meyer, Avery Dennison, Fiege, Hellmann, Deutsche Post DHL won the coveted German ECR-Award in the category Corporate Cooperation – Supply Side for successfully implementing their innovative "EPC/RFID for the Textile Supply Chain" project.

For more information contact:
Heide Buhl at buhl@gs1-germany.de

GS1 Standards in Belgian Post

Keeping The Post On Track

In 2009, bpost (Belgian Post) handled more than 12 million mail items a day, of those, more than 90000 are national registered mail which means they contain vital information for both the sender and addressee.

Faced with the need to ensure that a postal item could be tracked from post office to final destination including being aware of any instance where the item does not arrive, bpost decided to integrate GS1 standards in E-Tracker, an online solution enabling customers to trace, among other things, national registered mails.

Now bpost uses a certificate of posting for registered mail that must be completed and kept by the client after being stamped by the Post Office. It carries a GS1-128 bar code printed on a self-adhesive support, the upper part of which must be removed and affixed to the registered mail. The customer keeps the certificate of posting, still bearing the lower part of the same barcode. The Application Identifiers used in this case are AI (01) (GTIN of the product based upon bpost company prefix, in this case ***"national registered mail"*** and AI (21) (serial number of the national registered mail). GTIN and a serial number make each national registered mail unique.

This works effectively for both parties. Bpost is able to track and trace the shipment from post office to delivery by scanning the GS1 barcode at each important point of the delivery process and the customer can follow the shipment and know at any time where its mail is by using a track and trace tool online (E-TRACKER: www.bpost.be track). National registered mail has to be selected and the serial number encoded manually. The sender can check whether the national registered mail is still in transit or as already been received by recipient.

Standardisation Leads To Competitive Advantage

In the context of increased competition amongst postal service providers in Europe, bpost developed new solutions to enhance competitiveness, such as offering postal services or postal items outside the usual postal environment. A key development in this area was the opening of ***"Point Poste/Postpunt"*** counters in supermarkets and railway stations, since this enabled the company to reach more and more customers.

The issues of compatibility between commercial partners and compatibility with POS systems of the different retailers were one of the main challenges that had to be addressed. As GS1 standards are already widely and internationally spread in the retail environment, they were chosen to be sure that postal products and services could be scanned at the point of sale.

Based on the bpost company prefix, Belgian postal stamps, parcels, post cards are therefore identified with a GTIN 13 embedded in an EAN 13 barcode, opening the path for further collaboration and open possibility of many other solutions between bpost and commercial partners.

For more information contact:
Nicolas Stuyckens at NStuyckens@gs1belu.org

Driving Efficiencies In Transport

In Colombia, the transportation of goods takes up more than 37% of the logistics costs within the supply chain, which offers a great opportunity.

The main problem we see, is the lack of on time and reliable information between the customer, the third logistics party, and the driver. Even where it is available, it's often very informal and the information is frequently incomplete. In order to develop better ways to integrate the information related to the different transport processes and to achieve on line visibility and traceability, GS1 Colombia defined and implemented an integrated platform that uses different technologies. These include; automatic global positioning systems for vehicles using GPS and GPRS technologies, mobile PC's and EPC/RFID and other internet based-solutions.

The initiative is being lead by a third logistics party called Almacenar - Almagran with the support of GS1 Colombia and Solution Providers.

In the traceability process 30 customers participated, including Falabella, Carrefour and Exito (the retail brand of Casino in Colombia), their providers; Samsung and LG Electronics, 5 transportation enterprises and 150 drivers. GS1 Colombia facilitated the implementation supporting the companies and the service providers.

The new integrated platform has delivered significant benefits including:

- A 50% saving in time in relation to the transportation processes
- Savings of 67% in communications costs due to less use of mobile phones
- The information to be shared was set to a standard and is available to all parties through one channel
- Manual data input was reduced; data was only input once during the whole process and this consolidated the information and avoided mistakes.
- Much better visibility and traceability were developed in all the processes.
- Performance indicators were calculated automatically.
- Greater efficiency and diligence was achieved when assigning and searching for vehicles.
- Many inefficiencies were eliminated thus reducing costs and time.

For more information contact:
Yara Montana at ymontana@gs1co.org

Japan's Initiatives in Supply Chain Visibility

The Challenge

Many Japanese manufacturers have offshore production sites and trade around the world. However, since they generally consign the cargo shipping associated with production and sales to other companies, it has been difficult for them to effectively manage the global supply chain. To optimize the whole supply chain, these manufacturers need to understand the process in real time and take necessary measures in a timely manner, but a visibility platform to share cargo movement information among global supply chain parties has not yet been established. Therefore, building such a visibility platform to capture the cargo movement around the world using GS1 EPCglobal standards is under consideration.

In Japan, the movement to make the whole supply chain process visible using automatic identification technologies such as RFID has been accelerating among manufacturers for several years. The Ministry of Economy, Trade and Industry (METI) held a study committee for global supply chain visibility platform to foster this movement. At the same time, METI has also held Supply Chain Visibility Workshop at international conferences such as APEC (Asia-Pacific Economic Cooperation) and promoted the establishment of a visibility platform to share cargo movement information among global supply chain parties.

Cooperation with APEC

When building a platform to share cargo movement information, it is crucial to adopt technologies based on international standards and obtain agreement by the countries and industries involved in its operation. METI organized a Supply Chain Visibility workshop at the APEC meeting in September 2010 in Sendai, Japan.

At the beginning of this workshop, METI discussed the importance and necessity of supply chain visibility, and then the various industries, governments, and international standards organisations reported on their perspectives and efforts.

From the industries, global companies such as Canon, Toshiba, Oracle, IBM, DHL, and NYK Line expressed their own corporate expectations for supply chain visibility. At the same time, in addition to reports by the governments of Japan, China, Korea, Peru, Taiwan, Hong Kong, and Russia, the European Commission (EC) introduced their efforts toward supply chain visibility. Regarding the progress of international standards organizations, the World Customs Organization (WCO), the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), and GS1 also explained the related trends of standardisation. It was a highly significant workshop that deepened participants' understanding of supply chain visibility issues.

Based on the outcome of this workshop, it was clearly stated in the Joint Statement of APEC Ministerial Meeting that APEC would continue to consider supply chain visibility at its meetings. As such, the movement toward supply chain visibility is expected to accelerate in the APEC economies.

At the meeting, many countries and regions announced that they are considering the establishment of information platforms using EPCIS (EPC Information Services) of GS1 EPCglobal. The sharing of cargo movement information using EPCIS will be achieved in the near future within the APEC region.

The Japanese Approach

In Japan, a study committee for global supply chain visibility platform has been organised to consider and promote the system of cargo information sharing among companies (visibility platform) with the participation of academic experts, related organizations of shippers and distributors, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), and METI.

EPCIS, a standard specification of GS1 EPCglobal, is a promising tool for building the visibility platform. Therefore, GS1 Japan has researched EPCIS adoption case studies in other countries and reported to the study committee; one is the ezTRACK provided by GS1 Hong Kong and the other is the EPCIS application platform developed by a pallet leasing company in partnership with GS1 Singapore. In addition, since the Unique Consignment Reference (UCR) proposed by World Customs Organization (WCO) is one of the key ideas to facilitate the global supply chain visibility, the study committee invited the Customs and Tariff Bureau of the Ministry of Finance to learn the trends of the UCR.

The study committee will make a recommendation for a preferable design of such a visibility platform suitable for transport and logistics industry from these learnings.

Real efforts have been made toward the development of information platforms using EPCIS. MLIT has been developing the ***"Colins"*** portal site to provide container logistics information at ports in Japan. Development activity of its EPCIS- based container tracking functions has been completed and the functions are currently being tested. It will be available to companies who would like to have container tracking information shortly. As China becomes an even more important trading partner with Japan, METI has held policy consultations with China to share logistics information between Japan and China. Furthermore, MLIT has considered the cooperation among logistics information systems of three countries in the China-Japan-Korea Ministerial Conference on Transport and Logistics.

Looking To The Future

The development of the information platform as an infrastructure to capture and share cargo movement in global logistics is an ambitious initiative. It requires the definition of standards, agreement on the adoption of the standards among countries and companies, development of the actual system, and design to share the fair burden of its operation and maintenance among the various concerned parties. Despite these challenges however, the Japanese government has been taking steps toward its achievement, and leading companies have already started planning improvements to their business premised on the creation of the information infrastructure.

For more information contact:
Noriyuki Mama at n-mama@gs1jp.org

Improving distribution with GS1 Standards

The Raben Group, which has been active in Europe for over 80 years, started working in Poland in 1991 and is represented in the country, by two companies: Raben and Fresh Logistics. These companies offer a full range of logistics services. Raben's customers in Poland are, amongst others, companies from the food industry (FMCG) and from non-food industries, such as manufacturers of chemicals products, dangerous goods, car manufacturers and others.

A network of distribution centres with a total area over 250 000m2 gives employment for several thousand people. The Raben Group offers its customers competitive advantage by providing reliable customer-tailored solutions. This approach helped Raben to meet the needs of the most demanding customers and to become the market leader in Poland.

GS1 standards are indispensable in the operations of Raben Group.

Improved warehouse operations

From 2002 to 2003, The Raben Group introduced automatic data identification in the process of receiving goods and shipments into the warehouse. It is based on the use of GS1 EANCOM messages, or alternative exchange of information by email, and the use of the GS1 Logistics label. Manufacturers identify transport units with the GS1 Logistics label and send information to Raben electronically together with the physical despatch of goods to a warehouse. When goods arrive to the depot, the data is scanned and matched with information received from manufacturer earlier in electronic format. Thanks to introduction automation based on GS1 standards, Rabens group reduced the time for receiving goods in warehouse by 50% and significantly improved data quality.

The next step to adapt to the increasing customers' demand was to implement the Raben's Group GS1 logistic label, which is fully compliant with the GS1 General Specifications. For the first time it was used in 2005. Currently the company marks all the units compiled in warehouses with these labels and SSCC codes. Every day in several locations in Poland around 7,000 GS1 Logistics labels are printed. Thorough admission to the requirements of standards from the beginning of the process allowed the Raben Group to roll out implementation of the common template of GS1 Logistics Label with all their customers.

Traceability based on GS1 – solutions

The use of GS1 identification keys, such as SSCC and GTIN, together with Application Identifiers Batch Production number and Expiry Date, are the basis of the effective traceability system in the Raben Group. Serial Shipping Container Code (SSCC) is used in all warehouse operations. In addition, company identifies unique locations for each unit in the stock. All this data is captured and stored in the company's Warehouse Management System (WMS). Raben's group is proud to offer its customers robust Traceability system, based on the GS1 standards, advantages of the WMS and automatic data identification using radio frequency wireless scanners/terminals.

GS1 standards in transport

Integrating Raben's Warehouse Management System (WMS) with the client's systems is extremely important to any contract concerning logistic services. Accurate data exchange brings tangible benefits to both sides. Introduction of Automatic identification and data capture (AIDC) reduced manual work and improved data quality. Its use in all warehouse operations allows customers to track and trace their shipments on every stage of delivery and provides them with the real time update on the stock availability and movements in the supply chain. Thanks to the use of AIDC and scanning the labels, time between the physical unloading of goods and their availability for sale, is reduced to a minimum. Raben's group offers high level of flexibility in communication with its Customers. Often they use the standard GS1 XML in integration between the Raben Group WMS and the Clients' ERP systems.
The Raben Group has also implemented transport message IFTMIN with external transport partners and messages DESADV for customers. By using GLN numbers, which are used to identify their specific locations, the flow of messages is perfectly controlled.

Eurologistics Project

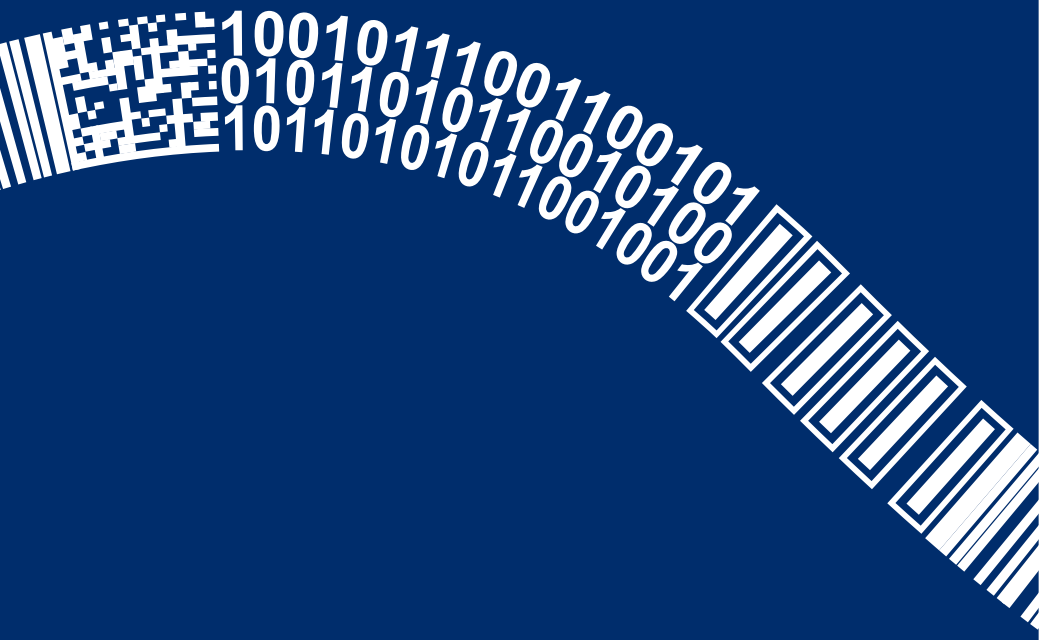
Use of GS1 Standard helps T&L operators in the development and expansion of offering their services. Particularly essential are in the project in the field of Eurologistics. Globalisation, the opening of borders and leadership in the region of the Central and Eastern Europe allowed Raben Group to open a new distribution centre - Central European HUB (CE HUB) in 2010. It is located in Chorzow (southern part of Poland) and it carries out the orders from the customers from Poland, Hungary, Czech Republic, Slovakia and Hungary.

The new distribution centre means the company can guarantee punctuality in terms of delivery times. In addition, using GS1 standards, including the application of GTIN, GLN numbers and EDI messages, means that despite the different languages used throughout the supply chain, communication from seller through to buyer runs smoothly. It was also found that the GS1 logistic label, which was previously used in national distribution, turned out to fully satisfy the requirements of foreign customers. SSCC number contained in the GS1-128 code enables full traceability in each of the countries subject to a common distribution.

The Eurologistics project was started for the first customer in CE HUB in Chorzów in the second half of 2010. The first phase of the project started with distribution within Poland and Hungary, after a few months, this was expanded to include the Czech Republic and Slovakia.

The project was successful on both sides and in recognition of this achievement, Raben Poland was awarded the prestigious Superior Customer Logistics Partnership Award.

For more information contact:
Patrycja Gaj at Patrycja.Gaj@ilim.poznan.pl



GS1 AISBL
Blue Tower
Avenue Louise 326, b10
B-1050 Brussels, Belgium
T +32 (0)2 788 78 00
F +32 (0)2 788 78 99
contactus@gs1.org

www.gs1.org